

IN THE CLAIMS

Claim 1 (Currently Amended): A method for removing an impurity gas discharged from a process apparatus used for processing objects by using a process gas, comprising:

evacuating an interior of the process apparatus, thereby drawing the impurity gas through an exhaust pipe connecting the process apparatus and a trap mechanism;

mixing a reaction gas to react with the impurity gas within the exhaust pipe at a location between the process apparatus and the trap mechanism to convert the impurity gas to reaction by-products, by-products having a lower vapor pressure than that of the impurity gas;

and

~~trapping said~~ condensing the reaction by-products ~~using so that the condensed~~ reaction by-products are trapped in the trap mechanism.

Claim 2 (Original): The impurity gas removing method according to claim 1, wherein the reaction gas is fed into a portion of the exhaust pipe in a vicinity of the process apparatus.

Claim 3 (Original): The impurity gas removing method according to claim 1, wherein the process gas is one of a titanium-containing gas, tungsten-containing gas and tantalum-containing gas.

Claim 4 (Original): The impurity gas removing method according to claim 1, wherein the reaction gas is at least one of an ammonia gas and oxygen-containing gas.

Claim 5 (Original): The impurity gas removing method according to claim 1, wherein an oxidative-gas is fed into a portion of the exhaust pipe.

Claim 6 (New): The impurity gas removing method according to claim 1, wherein an oxidative-gas is fed into the trap mechanism.

Claim 7 (New): A method for removing an impurity gas discharged from a process apparatus used for processing objects by using a process gas, comprising:

evacuating an interior of the process apparatus, thereby drawing the impurity gas through an exhaust pipe connecting the process apparatus and a trap mechanism;

mixing a reaction gas to react with impurity gas in the trap mechanism to convert the impurity gas to reaction by-products having a lower vapor pressure than that of the impurity gas; and

condensing the reaction by-products so that the condensed reaction by-products are trapped in the trap mechanism.

Claim 8 (New): The impurity gas removing method according to claim 7, wherein the reaction gas is fed into a portion of the exhaust pipe in a vicinity of the process apparatus.

Claim 9 (New): The impurity gas removing method according to claim 7, wherein the process gas is one of a titanium-containing gas, tungsten-containing gas and tantalum-containing gas.

Claim 10 (New): The impurity gas removing method according to claim 7, wherein the reaction gas is at least one of an ammonia gas and oxygen-containing gas.

Claim 11 (New): The impurity gas removing method according to claim 7, wherein an oxidative-gas is fed into a portion of the exhaust pipe.

Claim 12 (New): The impurity gas removing method according to claim 7, wherein an oxidative-gas is fed into the trap mechanism.